

MATUL, K.

MATUL, K. Prospective water management in agriculture and forestry. P. 512.
Vol. 16, no.12, Dec. 1956. GOSPODARKA WOLNA. Warszawa, Poland.

SOURCE: East European Accessions List (EEAL) Vol 6, No. 4--April 1957

MATUL, K.

The conditions of the development of water management in Poland against the background of the development of the national economy p.276. A summary of the discussion at the meeting of Section 13, p.282.

(GOSPODARSTWA WODNA. Vol. 17, No. 6, June 1957. Warszawa, Poland)

SO: Monthly List of East European Accessions (ELAL) 10. Vol. 6, No. 10, October 1957.

MATUL, Kazimierz, dr., inż.

Planning on water economy till 1980 compared with the "draft" of the plan from 1956, as reflected by the actual knowledge of Poland's needs. Gosp wodna 22 no.2:45-51 P '62.

1. Instytut Gospodarki Wodnej, Warszawa.

MATUL, Kazimierz, mgr inż.

Work trends and development indices of the Institute of Water Management. Gosp wodna 22 no.12:565-568 D '62.

1. Dyrektor Instytutu Gospodarki Wodnej, Warszawa.

MATUL, Mazimierz, dr inż.

Current problems of water management. Horyz techn 10 no.10:
4-7 0 '63.

1. Dyrektor Instytutu Gospodarki Wodnej, Warszawa.

MATUL, Kazimierz, dr inż.

Trends of activities of the Institute of Water Management. Gosp.
wodna 23 no. 8/9:344-347 Ag-S '63.

1. Director, Institute of Water Management, Warsaw.

MATUL, Kazimierz, dr inz.

Role of the Polish Committee for Water Management of the Chief
Technical Association in the development of water management.
Gosp wodna 23 no. 8/9: 35-356 Ag-S '63.

1. Chairman of the Polish Committee of Water Management of the
Central Technical Organization, Warsaw.

MATULA, Boleslaw

Considerations of application of ultra-acoustic waves.
Postepy hig. med. dow. 10 no.2:199-208 1956.

(ULTRASONICS, therapeutic use,
(Pol))

~~MAJUTIA~~ Boleslaw, dr

Coagulation of air suspensions. Pt. 1. Rudy 1 metals 8
no.6:200-202 Je '63.

MATULA, Boleslaw, dr

Coagulation of air suspensions. Pt. 2. Rudy i metale 8 no.7:
257-263 Ja '63.

MATULA, Boleslaw, dr

Coagulation of air suspensions. Pt. 4. Rudy i metalu 8 no.8:296-
298 Ag '63.

MATULA, B.

✓ Coagulation of smoke by means of an ultrasonic generator.
B. Matula (Univ. Poznań, Poland). Patent. Trans.
Phys. Acad. Sci. USSR, 1957, No. 1, 21-22.
(1957) (English summary).—A modified Hartmann aero-
dynamic generator of ultrasonic waves of great intensity is
described, and other generators are reviewed. In the app,
described, the flow is repd. from the acoustic field by a
membrane of high resistivity and small impedance, tuned
to resonator pitch. Observation of coagulating smoke re-
vealed the existence of a turbulent acoustic field. J. S.

3

MATULA, E.

Results derived from using high-tension switchgear in the iron and steel industries.
p. 330. (PRZEBUDOWA ELEKTROTECHNICZNA, Vol. 10, No. 8, Aug. 1954, Warszawa, Poland)

SC: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec.
1954, Uncl.

MATULA, E.

"Remarks on the analysis of power losses in metallurgy."

p. 146 (Gospodarka Cieplna, Energetyka Przemyslowa) Vol. 5, no. 4, July/
Aug. 1957
Warsaw, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

MATULA, E.

Distr: 4K2c/4K2b(w)

4327

001 21.004.10.021.944-03

Matula E. Economizing Electrical Energy in Rolling Mills

"Oszczędnosc energii elektrycznej w walcowniach". Energetyka Przemysłowa-Gospodarka Ciepła. No. 5-bis, 1957, pp. 221-225, 12 figs., 2 tabs.

On the basis of an analysis of power consumption by the main drive and such auxiliary equipment as roller conveyors, transfer tables, shears, lifting tables, and so on, the author comes to the conclusion that a decrease in unit consumption rate is to a large extent influenced by reduction of power required for idle run. A considerable percentage of idle run losses are attributed to the bearings, so that suitable choice and proper maintenance of bearings are essential. Good results are

obtained with special bearings fitted with oil filters. Moreover, a decrease in the unit consumption rate of a rolling unit can be obtained by increasing its production output and reducing the time of rolling, especially that required for the auxiliary operations; also influential are the skill of servicing personnel and the organization of work. In reversing type rolling mills additional losses are incurred if the personnel does not in the final stage of the rolling cycle utilize the kinetic energy of rotating masses which otherwise are braked before the reversal of direction. On initial runs driven by induction motors, it is advisable to use a flywheel with a moment of inertia so chosen that the peaks of load are cut off.

EW
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BM 22

MATULA, E.

Influence of the new electric-power rate on the prime costs of enterprises using electrothermic equipment. p. 203.

PRZEBUD KLEKTROTECHNICZNY. (Stowarzyszenie Elektrykow Polskich) Warszawa, Poland, Vol. 35, no. 5, May 1959.

Monthly list of East European Accessions (KEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

MATULA, E.

Electric steelworks in Poland, p. 437.

PRZEGLAD ELEKTROTECHNICZNY. (Stowarzyszenie Elektrykow Polskich) Warszawa,
Poland, Vol. 35, no. 10, Oct. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

MATULYA, Eduard [Matula, E.] doktor

Role of rapid freight trains in the international freight
transportation. Zhel. dor. transp. 45 no. 5:88-89 My '63.

(MIRA 16:10)

1. Prezident Yevropeyskoy konferentsii po raspisaniyam gruzovykh
poyezdov, Praga.

MATULA, Ed., dr.

Dual freight railroad transportation. Zel dep tech 12 no.:
29-30 '64

MATULA, J.

The first instruction in safety and hygiene of work in the field of surveying. p. 382. PRZEGLAD GEODEZYJNY. (Zwiazek Nierniczych Rzeczypospolitej. Polskiej) Warszawa. Vol. 11, no. 11, Nov. 1955.

So. East European Accessions List. Vol. 5, no. 1, Jan. 1956

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

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APR 11 1968, Las Cruces (graduate biologist); Kankrocht, Ivan Natalia Martin

1996. Contribution to the day of scientific work for celebrating the plants with thousand-year history

EVERT: *Biologia*, no. 10, 1964, 800-803

KEYWORDS: plant physiology, bioassays, agricultural machinery

Abstract: The authors describe an approach to their design

ABBREVIATION: Section for Biology and Landscape forming, Biological Institute of
 the Soviet Academy of Sciences, Bratskaya
 SUBMITTED: 15.04.66 ENCL: 01 SUB CODE: 12, IX
 NO. AND ROW: 000 OTHER: 002 JPRS

MATULA, M.

"Brief Notes on Geologic Problems in the Construction of the Greatest Hydroelectric Power Plant in the World." p. 395 (PRIRODA A SPOLODNOST. Vol. (2), No. 7, 1953; Praha, Czech.)

So: Monthly List of East European Accessions, (EAL), LC, Vol. 4, No. 4, April 1955, Uncl..

MATULA, M.

MATULA, M. Some results of research on geological conditions at
the site of the hydraulic construction in Mosice.p.110.

Vol. 7, no. 1/2, 1956, GEOLOGICKY SBORNIK, BRATISLAVA, CZECHOSLOVAKIA.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 10,
Oct. 1956.

MATULA, M.

MATULA, M. A review of tasks concerning the geologic surveys for the purpose
of hydroelectric constructions p. 3
Vol. 61, No. 44, 1956 GEOLOGICKE PRACE Bratislava Czechoslovakia

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4 April 1957

MATELA, M.

"Report on geologic research in the Devín-Late Area."

p. 158 (Geologický Sborník, Vol. 2, no. 1, 1954, Praha, Czechoslovakia)

Monthly Index of East European Agriculture (USAF) IC, Vol. 7, no. 2,
September 1958

MATULA, Milan, doc., inz., kandidat geologicko-mineralogickych ved;
PASEK, Jaroslav, inz., kandidat technickych ved.

Unification of the nomenclature, classification, and surveying
methods of rocks in engineering geology. Geol pruzkum 5
no.12:372-375 D '63.

1. Komenskeho universita, Bratislava; Geologicky ustav
Ceskoslovenske akademie ved, Praha.

JUHASZ, Adam, fomernek; ORBAN, Ferencne, kutatómesternok; MATULA, Miklos, fizikus

Analysis of the chemical composition and structure of sodium aluminum silicates as well as reducing the caustic soda loss in the Bayer process. Koh lap 98 no.2:66-73 F '65.

1. Aluminum Industry Designing Institute (for Juhasz).
2. Almasfuzito Alumina Factory, Almasfuzito (for Matula).

L 34965-66 RM/DS

ACC NR: AF6026650

SOURCE CODE: HU/0014/65/098/011/0513/0521

AUTHOR: Juhász, Adam (Metallurgical engineer); Ferencs, Orban (Research engineer);
Matula, Miklos (Physicist)

ORG: none

TITLE: Investigation of the chemical compositions and structures of sodium-aluminum silicates formed in the course of alumina manufacture according to the Bayer method. Part 2

SOURCE: Kohaszati lapok, v. 98, no. 11, 1965, 513-521

TOPIC TAGS: aluminum silicate, alumina, ion exchange, silicon dioxide, calcium oxide, causticization

ABSTRACT: [Part 1 of this series was published Ibid., vol. 98, no. 2, 1965] This installment described studies in the field of caustification of Na-Al silicates. The effects of CaO concentration, alkali concentration, molar ratio, temperature, and reaction time were investigated. It was reported that the processes involved in the caustification include sorptive adduction of SiO_2 onto the $3\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot 6\text{H}_2\text{O}$, ion-exchange processes between the lime and the various types of Na-Al silicates present, and topochemical reactions. The type and extent of the processes occurring under the various conditions investigated depends mainly on the parameters of the operation. Orig. art. has: 5 figures and 8 tables. [JPRS: 33,732]

SUB CODE: 13, 07 / SUBM DATE: none / SOV REF: 008 / OTH REF: 001

Card 1/1

JS

UDC: 669.712.111.2:546.33'621'628

L 47241-66 EWP(t)/ETI IJP(c) JH/JD

ACC NR: AJ 34297

SOURCE CODE: HU/0014/66/000/006/0276/0280

JUHASZ, Adam, Metallurgical Engineer, Orban, Ferenc Research Engineer, and MATULA, Miklos, Physicist,

ORG: none

"Investigation of the Chemical Composition and Structure of Sodium Aluminum Silicates and Reduction of the Caustic-Soda Losses in the Bayer Process"

Budapest, Kohaszati Lapok, Vol 99, No 6, Jun 1966, pp 276-280.

Abstract: This article is a continuation of a previous paper for which, however, no bibliographic reference has been cited. The formation mechanism of sodium aluminum silicate has been discussed on the basis of purely chemical analyses and the behavior of the sodium aluminum silicate in aluminate solutions has been investigated with the aim of utilizing the data obtained for reducing the losses of the alumina-manufacturing process according to the Bayer technique. The SiO_2 is thought to be present in a complex form; the solubility of the crystalline sodium aluminum silicate is in an inverse relation to the strength increase of the crystal lattice. Orig. art. has: 1 figure, 13 formulas and 1 table. [JPRS: 36,867]

TOPIC TAGS: aluminum silicate, silicon dioxide, sodium hydroxide

SUB CODE: 07 / SUBM DATE: none / SOV REF: 010

Card 1/1

UDC: 546.284:541.81669.712.111.2

ME 711A, M 2-1

Geological Survey of the State of New York
Geological Survey, Albany, N.Y.

U. S. Geological Survey, Albany, N.Y.
Bureau of Geology, Albany, N.Y.

MATULA, Milan

Facies analysis in the engineering geological survey of alluviums. Sbor. geol ved 1:133-161 '64.

1. Chair of Engineering Geology and Hydrogeology, Comenius University, Bratislava.

MA'ULA, M. A.

33230. Bandazhi Iz Zheleznodorozhnykh Rel's Dlya Apparata Mika I Barabana
Fal'Tsmana. Caxapl Prom-st', 1949, No. 10, c. 41-42

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

CA

Thermal cleaning of evaporators in a sugar factory.
M. A. Kishin, *Kishinevskaya Prom. 20*, No. 2, 307
(1980).—Steam in the calandria of the first body is shut
off and the juice is evacuated into the last body. The
vapor chamber of the first body is connected to the vapor
chamber of the last body by means of water-pipe connec-
tions. The steam is admitted into the calandria of the
first body and the temp. is raised to 100° and maintained
for 15-20 min. by means of regulating communication
between the vapor chambers of the first and last body.
V. K. Raikow

28

CA

Best pulp conveyor with double separator. J. L. Vilyan
skol and M. A. Matula. *Sobremennye Prom.* 20, No. 12, 20
34(1980).—A description of the conveyor is given.
V. E. Balhna

1951

MATULA, M.D.

Sugar Machinery

New machines for repair work. Sakh. prom. 26 no. 3, 1952

Monthly List of Russian Accessions, Library of Congress, June 1952 UNCLASSIFIED.

MATULA, M.A.

Our measures for reducing expenditures of money and materials on factory
repair work. Sakh.prom. 27 no.4:9-11 ap '53. (MLRA 6:6)

1. Dzhambul'skiy sakhar'nyy zavod.

(Sugar machinery)

MATULA, M.A.

Achievements of the workers of the Dzhambuli Sugar Factory during two years
of the five-year plan. Sakh.prom. 27 no.6:20-23 Je '53. (MLRA 6:6)

(Sugar industry)

1. Dzhambul'skiy sakhar'nyy zavod.

MAFULA, M.A.

Mechanisation of work in sugar warehouses. Sakh.prom.no.8:20-22
(MIRA 9:2)

'55.

1. Alma-Atinsky sakhsveketrest.
(Sugar industry--Equipment and supplies)

MATULA, M.A.

**Improving the quality of beet cassettes delivered by disk-type
slicers. Sakh.prom. 29 no.2:25-26 '55. (MLRA 8:6)**

- 1. Alma-Atinskiy sakhsveklotrest.
(Sugar industry -- Equipment and supplies)**

MATULA, M.A.

Eliminate the cause of low output of sugar refineries in winter.
Sakh.prom.30 no.1:17-18 Ja '56. (MIRA 9:6)

1.Alma-Atinskiy sakhsveklotrest.
(Sugar industry)

MATULA, M.A.

Control of salt deposits in industrial equipment. Sakh.prom.30
no.3:47-48 Nr '56. (MLRA 9:7)

1.Alma-Atinsk'iy sakhsveklotrest.
(Sugar industry--Equipment and supplies)(Boilers--Incrustations)

MATULA, M.A.

The quality of sugar beets harvested by beet combines. Sakh.prom.
30 no.7:16-17 J1 '56. (MLRA 9:11)

1. Alma-Atinskiy sakhsveklotrest.
(Sugar beets)

NATULA, M.A.

Sugar industry of Kazakhstan in the sixth five-year plan. Sakh.
prom 30 no.10:3-5 0 '56. (MIRA 10:1)

1. Alma-Atinskiy sakhsveklotrest.
(Kazakhstan--Sugar industry)

MATULA, M.A.

Shortcomings in the designing of refineries. Sakh.prom.30 no.11:43-44
N '56. (MLRA 10:2)

- 1. Alama-Atinskiy sakhsveklotrest.**
(Sugar industry)

MATULA, P.A.

Results of the work of the Alma-Ata Sugar Trust during the
first year of the sixth five-year plan. Sakh.prom. 31 no. 2:
11 Ag '57. (ALMA 10:8)

1. Alma-Atinskiy sakhsveklotrest.
(Alma-Ata--Sugar industry)

MATULA, M.A.

Prospects for the development of the Kazakh sugar industry. Sakh.
prom. 32 no.3:7-9 Nr '58. (MIRA 11:4)

1. Alma-Atinskiy sakheveklotrest.
(Kazakhstan--sugar industry)

MATULA, M.A.

Kazakhstan sugar industry in 1965. Sakh. prom. 32 no. 6:21-22
Je '58. (MIRA 11:7)

1. Alma-Atinskiy sovmarkhoz.
(Kazakhstan--Sugar industry)

MATULA, M.A.

Utilisation of capacity potentialities in the Dzhambul Sugar
Refinery. Sakh.prom. 33 no.10:38-39 0 '59. (MIRA 13:3)

1. Alma-Atinskiy sovmarkhoz.
(Dzhambul--Sugar industry)

MATULA, M.A.

Mechanization of loading and unloading operations in Kazakhstan.
Sakh. prom. 33 no.11:8-11 N '59 (MIRA 13:3)

1. Alma-Atinskiy sovmarkhoz.
(Kazakhstan--Sugar industry--Equipment and supplies)
(Loading and unloading)

~~MATULA, M.A.~~

For the economy of power and shel. Sakh.prom. 34 no.6:57-58
Je '60. (MIRA 13:7)

1. Alma-Atinskiy sovnarkhoz.
(Alma-Ata--Sugar industry)

MATULA, M.A.

Eliminating structural defects of the equipment. Sakh.
prom. 34 no.8:17-18 Ag '60. (MIRA 13:8)

1. Alma-Atinskiy sovnarkhoz.
(Sugar Machinery)

MATULA, M.A.; GAL'PERIN, A.S.

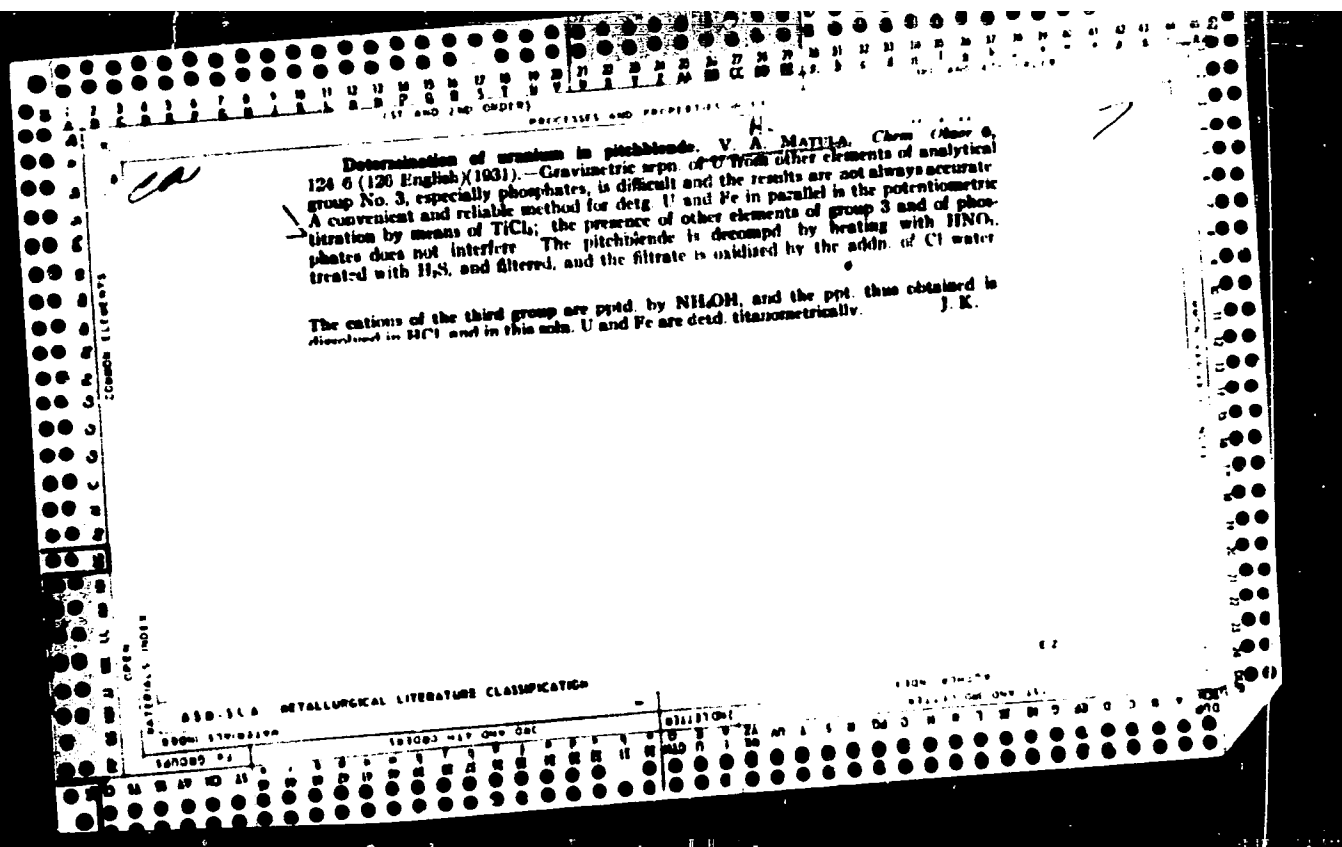
Sugar industry of Kazakhstan and prospects of its expansion.
Sakh.prom. 35[i.e. 36] no.2:13-18 F '62. (MIRA 15:4)

1. Alma-Atinskiy sovnarkhoz.
(Kazakhstan--Sugar industry)

MATULA, M.A.

Useful proposals. Sakh.prom. 35[i.e. 36] no.2:48-50 F '62.
(MIRA 15:4)

1. Alma-Atinskiy sovnarkhoz.
(Sugar industry—Equipment and supplies)



PROCEDURES AND PROPERTIES INDEX									
1ST AND 2ND SERIES					3RD AND 4TH SERIES				
<i>BC</i> <i>d-1</i> Method of dissolving platinum, for the preparation of sodium standards. V. E. Marvel. Coll. Chem. Chem. Comm. 1952, 2, 110-111. The platinum (Pt) is fused with H_2O_2 in a Pt crucible, the melt dissolved in HNO_3, and the HNO_3 evaporated. This is decomposed by HF and any residue dissolved in HNO_3. The method is applicable to all (I) and is superior to the acid decomp. The Boltwood coeff. applies in the case of old, unweathered, (I). R. S.									
ADD-51A METALLURGICAL LITERATURE CLASSIFICATION FROM SYNDICATE FROM ROMANOV COLLECTOR START ON ONY 151									

127 AND 128 (OVER) 129 AND 130 (OVER)

CC a-1

Reference to literature in identification analysis: V. E. Kuznetsov and G. E. Maslov (Chem. Abstr. 1958: 54-12404; Chem. Abstr. 1958, 1, 2788). The substance prepared from the leaves of *Adiantum* (A. 1958, 1959) is reported at p. 1-4, and having an absorption maximum at λ_{max} 2.1; it presents the property of changing color upon the introduction of water. The coloring matter of red cabbage is also an indicator.

A. H. C.

ABB-56A METALLURGICAL OPERATING CLASSIFICATION

FROM STANDARD

FROM COMPANY

DATE OF TEST

DATE OF TEST

MATULA, V.

Radioactive standards.

P. 13 (Chemie, Vol. 9, no. 1, Apr. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EFAI) LC. Vol. 7, no. 2,
February 1958

2,008/60/000/04/004/01,
E034/E416

AUTHOR: Vlastimil H. Matula

TITLE: Trans-Uranium Elements ¹⁹

PERIODICAL: Chemické listy, 1960, Nr 4, pp 353-359

ABSTRACT: After dealing with the history of these elements (Ref 1 to 26, Eq (1) to (3) and others) the author deals with their properties (Ref 4, 27 to 30, 14), Table I giving a survey of the oxidation states of lathanides and actinides. The footnotes to Table I indicate: (a) The oxidation state given in brackets are unstable and apart from Pa are incapable of existing in solution and are found only in the solid state; (b) The most stable oxidation states of each actinide is set in bold face. The position of the trans-uranic elements in the periodic system is then discussed (Ref 27, 30 to 35). There are 1 table and 35 references, 12 of which are German, 1 Czech, 1 Soviet, 2 French, 1 Spanish, 2 Swedish and 16 English.

ASSOCIATION: Průmyslová škola jaderné techniky, Praha
(Technical College for Nuclear Technology, Prague)

Card 1/1

~~NAME, N. Vladimír~~
SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees:

Affiliation:

Source: Prague, Chemické Listy, No 11, Nov 60, p 1161

Data:

Author of "From the Early History of Radioactivity," Source.

Author of "Increase of Quantity of Chemical Information," Source.

Page 1 of 1

(1)

090 981643

MATULAITIS J., med. felceris

Activities in a rural center. Sveik. apsaug. no.12:43-44 '62.

1. Vilkaviskio raj. Slabadu apyl. felceriu-akuseriu punktas.
(RURAL HEALTH) (HEALTH PROFESSIONS)

MATULAY, K., Prof., MUDr.; KLUKAN, B., MUDr.; HAPL, F., MUDr.

Laboratory findings in pneumoencephalography; characteristics of formative elements. Cesk. neur. 19 no.2:125-129 May 56.

1. Statna liecebna psychiatricka, Pezinok.
(BRAIN, radiography,
pneumoencephalography, laboratory aspects (Cs))

MATULAY, K.

MATULAY, K.; WAGENHOFER, E.; NEORAL, Z.

Electrophoretic spectra of blood & cerebrospinal liquid in various diseases of the central nervous system. Cesk. psychiat. 53 no.5:301-317 Oct 57.

1. Z Psychiatrickej liecebne v Pezinku, s II detskej kliniky LFUK v Bratislave s 2. Obvod. ustavu narodneho zdravia v Bratislave, riad.

M. Csader a so Strediska pre zdrav. statistiku v Bratislave.

(CENTRAL NERVOUS SYSTEM, dis.

blood & CSF electrophoresis (Cs))

MATULAY, Karol; POGADY, Jozef

A contribution to the diagnosis of neurosyphilis with pallidum antigen in psychiatry. Cas.lek.cesk 100 no.38/39:1240-1244 29 S '61.

1. Neurologické oddel. polikliniky v Bratislave, veduci prof. dr.
K. Matulay, Krajská psychiatrická nemocnice v Pezinku, prednosta MUDr.
J. Pogady.

(NEUROSYPHILIS immunol)
(TREPONEMA PALLIDUM immunol)

USSR / Cultivated Plants. Ornamental Plants.

M-10

Abs Jour: Ref Zhur-Biol., 1956, No 10, 73251.

Author : Matulenis, A.
Inst : Not given.
Title : Nurseries.

Orig Pub: V sb.: Materialy 1-go resp. soveshchaniya po zelin-
nau str-vu, Vil'nyus, Gaz.-zhurn. izd-vo, 1957, 81-
85.

Abstract: The condition is characterized of nurseries of the
Lithuanian republic leskhozes and forests which
raise ornamental types of trees and shrubs as well
as fruit-berry transplants. The largest nursery
is described - the Aitcuskiy. -- N. S. Lebedeva.

Card 1/1

L 18048-66 INT(m)/INT(f)/INT(m)/INT(t) IJP(c) RDM/JD/GS

ACC NR: AT0001342

SOURCE CODE: UR/0000/65/000/000/0143/0148

AUTHOR: Vishchats, Ya. K.; Gal'vidis, N. N.; Mstulovis, A. Yu.; Taureytens, S. A.

ORG: Institute of Physics AN AzerbSSR (Institut fiziki AN AzerbSSR)

TITLE: Study of inhomogeneities in electrophotographic layers of selenium

SOURCE: AN AzerbSSR. Institut fiziki. Selen, tellur i ikh primeneniye (Selenium, tellurium and their utilization). Baku, AN AzerbSSR, 1965, 143-148

TOPIC TAGS: selenium, crystal growth, crystal growth rate, photoelectric absorption, photoelectric property, metal physics

ABSTRACT: The distribution of hexagonal modification in selenium photoelectric layers and its effect on certain photoelectric properties were studied. Experiments were performed on vapor deposited selenium (in vacuo-- 10^{-3} to 10^{-5} torr) using aluminum substrates heated to 50-95°C; the thicknesses ranged from 10 to 25 μ . A continuous crystallized layer of hexagonal modification was formed at substrate temperatures above 85°C, while below this temperature it was disconnected. The spectral distribution (A_1/l_p) of longitudinal photosensitivity was given as a function of wavelength for rear illumination and for both anodic and cathodic layers; the re-

2

1. 18010-66

Acc No: AF00012-2

0
 salts were characteristic of a homogeneous hexagonal modification, a maximum occurring at about 0.7 μ . The most continuous layer (substrate temperature of 95°C) was tested by an MCM-4 megameter for sensitivity to illumination resistance as a function of sample length both for darkness and a constant illumination of 0.15 w/m². A schematic representation of the microstructure of the selenium layer is given. This microstructure is related to the inhomogeneity of resistance to photosensitivity in the modified layers which varied from 10¹² to 10¹⁶ ohms and which was calculated from the following formula:

$$\frac{1}{R} = \frac{1}{R_0} + \frac{1}{R_1} = \frac{S_1}{\rho_1 l} + \frac{S_2}{\rho_2 l}$$

where l is the layer thickness along the electric field, $\rho_1 = 10^4$ ohm-cm and $\rho_2 = 10^{10}$ ohm-cm are the specific resistances of the hexagonal and amorphous modifications of selenium, respectively, and S_1 and S_2 are areas of the cross sections. The dependence of photoresistance to dark resistance was in good agreement with theoretical and experimental results. The above data were discussed in terms of defects and holes in the layers and their reactions with electrons. Orig. art. has: 6 figures, 1 table, 1 formula.

SUB CODE: 11. 20/

SIGN DATE: 10Mar65/

ORIG REF: 002/

OTH REF: 003

Card 2/2 5m/

L 39663-66 EWT(1)/EWT(m)/ETC(f)/ENG(m)/LWP(t) IJP(c) RW/ID/GS/3D-2
 ACC NR: AT6001343 SOURCE CODE: UR/0000/65/000/000/0149/0156

AUTHOR: Matulenis, A. Yu.; Vishchakas, Yu. K.; Yushka, G. V.; Gal'vidis, N. M.

ORG: none

TITLE: Unipolar longitudinal photoconductivity of electrographic selenium films

SOURCE: AN AzerbSSR. Institut fiziki. Selen, tellur i ikh primeneniye (Selenium, tellurium and their utilization). Baku, AN AzerbSSR, 1965, 149-156

TX AC TAGS: selenium, semiconductor conductivity, drift mobility, temperature dependence, metal physics

ABSTRACT: ^{21, 44, 51} Unipolar electrographic properties (higher initial potential or photo-sensitivity for charge of a single sign) of Se films were studied. The specific drift length (μ) was related to these properties by the relation:

$$\gamma = \Delta i_+ / \Delta i_- = \mu_h \tau_h / \mu_e \tau_e$$

where Δi_+ is the photocurrent at the illuminated anode, Δi_- is the photocurrent at

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I. 39663-66

ACC NR: AT6001343

0

the illuminated cathode of the same electrode. μ_e , μ_h are the mobilities of the electrons and vacancies, and τ_e , τ_h are the respective lifetimes. A schematic of the apparatus used for measuring the relative photocurrents (I) is given. Amorphous and crystalline Se films of 0.8 to 1 mm thickness were used. This thickness was much greater than the drift length but much less than the reverse coefficient of saturation. For small voltages, I increased linearly with voltage for the amorphous Se, while at higher voltages it saturated rapidly. The specific drift lengths of the carriers were calculated to be $1.7 \cdot 10^{-11} \text{ m}^2/\text{v}$ (electrons) and $2 \cdot 10^{-10} \text{ m}^2/\text{v}$ (vacancies). The effects of crystallization (hexagonal modification) were studied by comparing the spectral distribution of I for both amorphous and hexagonal Se. The amorphous film had much higher values of I at the lower wavelengths (0.4 to 0.6 μ) but went through a transition at 0.7 μ and dropped below the hexagonal; the hexagonal had the opposite relationship: it rose with wavelength and saturated at 0.7 μ . A micrograph (1630x) is given of an initially amorphous film which was subjected to a temperature gradient (10°C on one face and 90°C on the other). The specimen was fractured at the interface of the amorphous-crystalline boundary. Further data are given for the dependence of the longitudinal photocurrent on the temperature of the vaporizing Se substrate. For temperatures below 85°C, the value of I increased sharply due to weaker vacancy injection. An explanation of the results based on

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I. 37663-46
ACC NR: AT6001343

special distribution of electron charge and vacancy injection is given. The best sensitivity and lowest dark current were obtained at substrate temperatures of 85°C. However, impurities in the Se lowered crystallization and interfered with getting these optimal conditions. Orig. art. has: 5 figures, 2 tables, 5 formulas.

SUB CODE: 11, 20/ SUBM DATE: 10Mar65/ ORIG REF: 007/ OTH REF: 007

Card 3/3

L 46938-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/AT

ACC NR: AP6015492

(N)

SOURCE CODE: UR/0101/66/008/005/1616/1617

AUTHOR: Vishchakas, Yu. K.; Yushka, G. B.; Petrevichus, A. D.; Matulenis, A. Yu. ⁶¹_B

ORG: Vil'nyus State University im. V. Kapsukas (Vil'nyusskiy gosudarstvennyy universitet)

TITLE: The kinetics of forward photocurrent limited by a spatial charge in amorphous selenium ²¹

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1616-1617

TOPIC TAGS: selenium, photoconductivity, current carrier, hole mobility

ABSTRACT: Amorphous Se with a specific resistivity of 10^{10} ohm-cm, a hole drift of $>10^{-7}$ m²/v, a quantum yield of 0.1 to 1 (photon energy 2.5 to 3.0 ev), and a free-to-captured-holes ratio of >0.01 was examined. The experimental equipment included a pulse light source (ISSh-15, ISSh-100-3), a monochromator, and an oscillograph (input impedance 10 kohm, and capacitance 50 picofarad). Photocurrents were generated by constant voltage and by intermittent light. The density of the maximum photocurrent depends on the voltage, according to

$$j_s = 1.21 \cdot \frac{9}{8} \epsilon_s \mu_h \frac{U^2}{d^3}$$

Card 1/2

I 46938-66

ACC NR: AP6015492

where ϵ is the relative dielectric constant, ϵ_0 is the dielectric constant of the vacuum, μ is mobility, U is voltage, and d is the specimen thickness in the direction of the electric field. A possible break in the curve and further linear increase at high voltages indicate that the divergence of the hole current reaches the generation tempo of the carriers. The determined quantum yield agrees with the results obtained by other authors. The calculated curves correspond to a hole mobility $\mu = 1.4 \cdot 10^{-5} \text{ m}^2/\text{v} \cdot \text{sec}$. Trapping and recombination in the specimens are insignificant. Orig. art. has: 2 figures, 2 formulas.

SUB CODE: 20/

SUBM DATE: 20Sep65/

ORIG REF: 001/

OTH REF: 005

curves
Card 2/2

L 02231-67 ENT(1)/ENT(m)/EWP(t)/ETI IIP(c) ID/AT

ACC NR: AR6013670

SOURCE CODE: UR/0058/65/000/010/E067/E067

AUTHOR: Matulenis, A. Yu., Guoga, V. I. 57
B

TITLE: Role of the tunnel transition in the relaxation of the electrostatic potential of zinc oxide

SOURCE: Ref. zh. Fizika, Abs. 10E539

REF. SOURCE: Sb. Probov dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 330-333

TOPIC TAGS: zinc oxide, tunnel effect, electrophotography, relaxation process, electron recombination

ABSTRACT: The authors investigated the relaxation of the electrostatic potential of electrophotographic layers ZnO on an aluminum substrate at different temperatures. At the start of the charging process, tunnelling of the electrons takes place from the surface into the volume. The succeeding exponential part of the relaxation is apparently connected with recombination of the thermally generated holes on the surface of the ZnO. G. Stepanov. [Translation of abstract].

SUB CODE: 20

Card 1/1 LC

MATULENKO, Yu. A.; SAVIN, I. A.; STAVINSKIY, V. S.

Using the method of Vavilov-Cherenkov radiation interference for
measuring the speed of particles. Prib. i tekhn. eksp. no. 3:44-45
M-D '56. (MIRA 10:2)

1. Elektrofizicheskaya laboratoriya AN SSSR.
(Interferometry) (Particles, Elementary--Measurement)

8209
5/05/69/03/02/20/061
8006/8011

246310

Authors:

Barnes, L. E., Verbitskiy, A. I., Voznesenskiy, G. G.,
Mikhailov, A. I., Sigalov, E. A., Kulakov, E. A., Lavitskiy, A. I.,
Mikhailov, E. A., Savitskiy, I. A., Seleznev, E. I., Strunov,
I. V.

Title: Channel for Antiprotons with a Momentum of 2.8 Bev/c

Periodical: Soviet Experimental and Theoretical Physics, 1960,
Vol. 32, No. 2, pp. 445-448

Summary: The authors of the present paper describe a channel built for the investigation of the interaction of antiprotons in a 21-cm chamber. Antiprotons were produced by 8-Mev protons in a target. Fig. 1 is a schematic representation of the channel described in the following. The antiprotons were identified from their velocity ($\beta = 0.95$) by means of three Charakoff counters, each of which was provided with two photomultiplier tubes of the type 43-33 (PM-33) whose efficiencies are specified in Table 1. The efficiencies obtained with different coincidence combinations are given in Tables 2 and 3. Fig. 2 shows the angular distribution of antiprotons.

Channel for Antiprotons with a Momentum of 2.8 Bev/c

System, and respective data are supplied in Table 4. The efficiency of the channel described with respect to antiprotons is found to be 60-80%. The results are briefly described next. By the system described here, the antiprotons are identified from their velocity ($\beta = 0.95$) by means of three Charakoff counters, each of which was provided with two photomultiplier tubes of the type 43-33 (PM-33) whose efficiencies are specified in Table 1. The efficiencies obtained with different coincidence combinations are given in Tables 2 and 3. Fig. 2 shows the angular distribution of antiprotons.

Angle target proton beam particle anti-
intensity intensity beam to the
channel

θ^0	Be	10^3	1000	$(1.05 \pm 0.15) \cdot 10^{-4}$
θ^0	Be	10^3	~700	$(1.57 \pm 0.18) \cdot 10^{-4}$
θ^0	Cu	10^3	~700	$(2.42 \pm 0.55) \cdot 10^{-4}$

The number of particles recorded in the channel agrees with data concerning Card 2/3

Channel for Antiprotons with a Momentum of 2.8 Bev/c

Fig. 2. Angular distribution of antiprotons in emulsions (Ref. 4). The increase in the number of antiprotons in the transition from 0 to θ^0 in the laboratory system agrees with predictions made on the strength of the statistical theory. By considering pion absorption ($\sigma_p \sim 50$ mb) and antiproton absorption ($\sigma_{\bar{p}} \sim 60$ mb) as well as the attenuation of the beam of primary protons ($\sigma_{p1} \sim 50$ mb), the ratio of the differential production cross sections of π^+ and π^- mesons with 2.8 Bev/c under θ^0 in the laboratory system is found to be $\frac{d\sigma_{\pi^+}}{d\Omega} / \frac{d\sigma_{\pi^-}}{d\Omega} \approx 1.5 \cdot 10^{-4}$.

There are 2 figures, 5 tables, and 4 references. 5 Soviet, 1 Italian, and 1 International (CERN).

ASSOCIATION: Ob'edineniy Institut Yadernykh Issledovaniy
(Joint Institute of Nuclear Research)

DATE: 1 September 1, 1959

Card 1/3

VOVENKO, A.S.; GOLOVANOV, L.B.; KULAKOV, E.A.; LYUBIMOV, A.L.; MATUIEN-
KO, Yu.A.; SAVIN, I.A.; SMIRNOV, Ye.V.

[Total cross sections of π^- -meson interaction with protons at
high energies] Polnye secheniia vzaimodeistviia π^- -mezonov s
protonami pri vysokikh energiakh. Dubna, Ob"edinennyi institut
iadernykh issledovani, 1961. 11 p. (MIRA 14:11)
(Mesons) (Protons)

21.5300

20677

S/120/61/000/001/001/002
E032/E314

AUTHORS: Belyakov, A. N., Vovenko, I. S., Kirillov, A. D.,
Kulakov, P. A., Lyubimov, A. L., Matulenko, Yu. A. and
Savin, I. A.

TITLE: Gas-filled Threshold Cherenkov Counters for
Accelerator Experiments

PERIODICAL: Prihory i tekhnika eksperimenta, 1961, No. 1,
pp. 32 - 35

TEXT: The velocity analysis of fast particles ($\beta \sim 1$) by
Cherenkov counters, using the dependence of the threshold or
angle of Cherenkov emission on the velocity, is possible if
the refractive index of the medium is close to unity. This
condition is satisfied only by gaseous media. The present
paper describes two gas-filled Cherenkov counters. One of
them (supplied by Yu. A. Troyan, L. S. Okhrimenko and
S. V. Mukhin) was an experimental counter which was used in
studies designed to establish whether it is possible to
separate out rare particles against a background of other
particles. The second counter was designed for work in the

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S,120/61/000/001/000/C+2
EO32/E311

Gas-filled Threshold

π^+ and K-meson beams of the synchrophasotron of the Joint Institute for Nuclear Research. The first of the above counters is shown in Fig. 1, in which 1 - is the steel body, 2 - is a glass tube 30 mm in diameter and covered with a film of aluminium on the inner surface, 3 - is a hollow light pipe, 4 - is a perspex window and 5 - is an FEU-33 (FEU-33) photomultiplier. Fig. 2 shows the second of the above counters, in which 1 is the steel body, 2 is a polished dural tube, 80 mm in diameter and coated with an organic film and then an aluminium film on the inner surface, 3 is a quartz window and 5 is an FEU-33 photomultiplier. The first counter (C_1) was used in the π^+ meson beam of the synchrocyclotron of the Joint Institute of Nuclear Research. The energy was 300 MeV. The second counter (C_2) was used in the beam of positive particles of the synchrophasotron of the above institute (largely π^+ -mesons and protons) the momentum being ~ 3 GeV/c. In both cases, the Cherenkov counter was

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Gas-filled Threshold

S/120/61/WG/1001/008/002
E032/E311

connected in coincidence with a scintillation monitor telescope whose counters had a diameter slightly smaller than the diameter of the Cherenkov counter. The Cherenkov counter was arranged as shown in Fig. 3. C in this figure represents the scintillation counters, VP -1a represent amplifiers, the rectangular block in the centre of the figure indicates the position of the Cherenkov counter and the three rectangular blocks on the righthand side of the figure are coincidence circuits with resolving times as indicated. In these experiments the ratio $m = N_2/N_1$ was measured. Fig. 4 shows the ratio m as a function of pressure in atmospheres for the C₁ counter (filled with air). Curve a refers to a kinetic energy $E_K^{\pi^-} = 297$ MeV and Curve b to $E_K^{\pi^-} = 240$ MeV .
 $p_{\mu}^a, p_{\mu}^b, p_{\pi}^a, p_{\pi}^b$ indicate the threshold pressures of the a and b curves for π^- and μ^- mesons, respectively. Curve b was taken with a telescope containing a Cherenkov counter which was more sensitive to μ^- -mesons than π^- -mesons.

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002/0311

Gas-filled Threshold

Fig. 5 shows the ratio m as a function of pressure in atm. for the C_1 counter filled with ethylene ($E_k = 392$ MeV). It is clear from Figs. 4 and 5 that it is possible to separate out π -mesons in a beam of π -mesons. Fig. 6 shows the dependence of m on the pressure for the C_2 counter filled with air. This curve was obtained for a beam containing 10^8 π -mesons and 10^8 protons. p_π and p_p show the threshold pressures for π - and p -mesons. It is concluded that particle separation is possible with these counters. There are 6 figures and 1 non-Soviet reference.

ASSOCIATION: Ob'edinennyy institut yadernykh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: February 13, 1960

Card 1/4

MATULENKO, Yu. A.

VOVENKO, A. S., KULAKOV, B. A., LINGACHEV, M. F., MATULENKO, Yu. A., LYUBIMOV, L. L.,
BAVIN, I. A., SMIRNOV, E. V., and STAVINSKIY, V. S.

"Elastic Scattering of η -Mesons on Hydrogen on the 180° Angle"

Report presented at the Intl. Conference on High Energy Physics, Geneva.
4-11 July 1962

Joint Institute for Nuclear Research
Laboratory of High Energies, Dubna, 1962

MATULENKO, YU. A.

VOVENKO, A. S., KULAKOV, B. A., LUKHACHEV, M. F., LYUBIMOV, L. L., MATULENKO, Yu. A.,
SAVIN, I. A., SEMANOV, Ye. V., STAVINSKIY, V. S., TUN-CHANG, Sui, TIAN-FU, Khe

"Inelastic Interactions of K^+ - Mesons with Hydrogen"

report presented at the Intl. Conference on High Energy Physics, Geneva,
4-11 July 1962

Joint Institute for Nuclear Research
Laboratory of High Energies, Dubna, 1962

MATULENKO, Yu. A.

KULAKOV, B. A., LIKHACHEV, M. P., ~~MATULENKO, Yu. A.~~, SAVIN, L. A., SMIRNOV, Ye. V.
and STAVINSKIY, V. S.

"Total Cross-Sections of K^+ - Mesons with Hydrogen at the Momenta From
3, 0 to 5, 0 GeV/c"

report presented at the Intl. Conference on High Energy Physics, Geneva.
4-11 July 1962

Joint Inst. for Nuclear Research
Lab. of High Energies, Dubna, 1962

MATULENKO, Yu.A.

S/120/62/000/002/009/047
E039/E520

AUTHORS: Vovenko, A.S., Kulakov, B.A., Likhachev, M.F.,
Lyubimov, A.L., Matulenko, Yu.A., Savin, I.A. and
Stavinskiy, V.S.

TITLE: A differential gas Cherenkov counter

PERIODICAL: Priory i tekhnika eksperimenta, no.2, 1962, 49-52

TEXT: A detailed description is given of a differential gas Cherenkov counter developed in the high energy laboratory of OIYaI in 1959 and used in the beam of the synchrophasotron for the detection of K-mesons in pulses of 3-5 GeV. Cherenkov radiation from particles moving through the gas in the counter is focused by a spherical aluminium coated mirror onto a circular diaphragm placed in front of a perspex plug through which the light passes and is detected with a QY-24 (FEU-24) photomultiplier. The plane of the photocathode is perpendicular to the direction of the particle beam, which has a maximum diameter of 10 cm, and the axis of the photomultiplier is displaced about 12 cm from it. A more detailed discussion of the optical aberrations is given. The radiation tube is about 1.5 m long and is lined with black velvet to reduce the background count; this
Card 1/2

A differential gas Cherenkov counter S/120/62/000/002/009/047
E039/E520

reduced the effective working length to 0.7 m. A photomultiplier with high quantum efficiency and large amplification is necessary and the electronic circuitry is sensitive to a pulse corresponding to one photoelectron from the cathode of the photomultiplier. The variation of efficiency with air pressure was determined and it is shown that a background count appears at pressures greater than ~ 25 atm. This background can be reduced further, to ~ 1 to 2%, by using gases such as ethane and ethylene. Peak efficiency is at about 10 atm for air and K-mesons and π -mesons can be separated in pulses up to 6 GeV/s. There are 4 figures.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy
(Joint Institute for Nuclear Research)

SUBMITTED: August 17, 1961

Card 2/2

VOVENKO, A.S.; GOLOVANOV, L.B.; KULAKOV, B.A.; LYUBIMOV, A.L.; MATULENKO,
Yu.A.; SAVIN, I.A.; SMIRNOV, Ye.V.

Total cross sections of π^- -meson and proton interaction at
high energies. Zhur.eksp.i teor.fiz. 42 no.3:715-720 Apr '62.
(MIRA 15:4)

1. Ob'yedinennyy institut yadernykh issledovaniy.
(Nuclear reactions) (Mesons) (Protons)

VOVENKO, A.S.; KULAKOV, B.A.; LIKHACHEV, M.F.; MATULENKO, Yu.A.; SAVIN, I.A.;
STAVINSKIY, V.S.

Cherenkov gas counters. Usp. fiz. nauk 81 no.3:453-505 N '63.
(MIRA 16:12)

VOVENKO, A.S.; GRACHEV, A.G.; LIKHACHEV, M.F.; MATULENKO, Yu.A.; SAVIN, I.S.;
SYUY YUN-CHAN [Hsu Yung-ch'ang]; KHE YUAN-FU [Ho Yuan-fu]

Elastic scattering of positive 3.2 Gev./sec. π^+ -mesons by protons.
IAd. fiz. 1 no.4:681-686 Ap '65. (MIRA 18:5)

1. Ob'yedinennyy institut yadernykh issledovaniy.

VOVENKO, A.S.; GUS'KOV, B.N.; LIKHACHEV, M.F.; LYUBIMOV, A.L.; MATULENKO, Yu.A.; SAVIN, I.A.; STAVINSKIY, V.S.

Elastic scattering of π^+ -mesons on protons at an angle of 180° at high energies. Pis'. v red. Zhur. eksper. i teoret. fiz. 2 no.9:409-413 N '65. (MIRA 18:12)

1. Ob'yedinennyy institut yadernykh issledovaniy. Submitted September 15, 1965.

L 11946-66 EWT(m)/1/ENA(m)-2

ACC NO: AF6000736

SOURCE CODE: UN/0386/65/002/009/0409/0413

AUTHOR: Yermolaev, A. S.; Oboznenov, R. N.; Likhachev, N. P.; Lyubimov, A. L.; Matulenko, E. A.; Savin, I. A.; Stetsko, V. S.

ORG: Joint Institute of Nuclear Research (Ob'yedinenyy institut yadernykh issledovaniy)

TITLE: Elastic 180° scattering of π^+ mesons by protons at high energies

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prikladye, v. 2, no. 9, 1965, 409-413

TOPIC TAGS: elastic scattering, pion scattering, proton scattering, scattering cross section

ABSTRACT: This is a continuation of earlier measurements of the differential cross sections for elastic π^+p scattering in a small solid angle about 180° at π^+ -meson 1.s. momenta 3.15, 4.10, and 4.85 GeV/c, carried out at the High Energy Laboratory of the Joint Institute for Nuclear Research, the results of which for 3.15 GeV/c have already been published (Phys. Lett. v. 17, 68, 1965). In this paper the authors present the results for 4.10 and 4.85 GeV/c and compare the data obtained at all three energies. The measurements at the different energies were made with the same setup, which was already described earlier. The ratio of the number of elastic π^+ -meson backward-scattering events registered by the apparatus to the total number of obtained photographs decreased with increasing energy (1.44, 1.11, and 1.40 at 3.15, 4.10, and 4.85 GeV/c, respectively). This was due not only to the decrease in the measured

Cont 1/2

L 11945-66

ACC NR. AF6000736

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cross section, but to a deterioration of the background conditions as a result of the smaller spatial separation of the recoil protons from the beam particles. It was therefore required to apply more rigorous criteria for the selection of the backward elastic-scattering events than earlier. The effective c.m.s. solid angle of the set-up, calculated by the Monte Carlo method with account of the Coulomb scattering of the particles, was 5.07×10^{-3} sr for 4.10 GeV/c and 3.04×10^{-3} sr for 4.85 GeV/c. The effective cross sections, corrected for the nuclear interaction of the primary and back-scattered π^+ mesons and the recoil proton in the hydrogen target and in the counters, for the beam contamination of the beam, for decay of the scattered pion, for the efficiency of the scintillation counters and the electronic circuitry, and for the efficiency of the spark chambers, were (99 ± 12) , (7 ± 11) , and (37 ± 12) $\mu\text{b}/\text{sr}$ for 3.15, 4.10, and 4.85 GeV/c, respectively. The previously deduced existence of a narrow peak of appreciable magnitude in the differential cross section of elastic $\pi^+\pi^+$ backward scattering at 3.15 GeV/c is confirmed. Authors thank V. Birulev, S. Bobrov, A. Kozlov, I. Makarin, V. Perevoshnikov, and N. Chernykhov for help with the work, V. Kozlov for compiling the program and performing the computations, the proton synchrotron crew for stable operation of the accelerator, and the operating staff of the cryogenic division for supplying the liquid hydrogen. Orig. art. has: 1 figure, 1 formula, and 1 table.

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SOV/175--58-6-34/41

AUTHOR: Matulevicius, V., Lieutenant
TITLE: An Electrician's Checking Instrument
PERIODICAL: Tankist, 1958, Nr 6, pp 52-53 (USSR)
ABSTRACT: The author briefly describes a simple device for checking electrical equipment. The device is shown in a drawing (Figure 1). A metal box contains: an ammeter for a.c., having a maximum of 15 to 20 a., a transformer 220/12, 15, 24, 27 of about 250 watts capacity, several sockets and switches. The electrical circuit of the checking device is shown in the diagram (Figure 2). The device may be used for checking the insulation of a motor, current needed for a transformer, or a hand-boring machine, etc. The device may also be used for checking a.c. ammeters of 15-20 a. and condensers. There is 1 diagram and 1 circuit.

Card 1/1

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A case of appendicitis in situs inversus viscerum totalis. Sveik.
apsaug. 6 no.9(69):41 S '61.

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(APPENDICITIS case reports)
(SITUS INVERSUS case reports)

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Respiratory tract during electric, cardiazol and insulin shocks.
Neurologia etc. polska 4 no.1:17-22 Ja-F '54.

1. Z Kliniki Chorob Dzieciacych, Kierownik: prof. dr H. Brokman,
Zakladu Radiologii. Kierownik: prof. dr W. Grabowski i Kliniki
Chorob Psychiczych A.N.G. Kierownik: prof. dr T. Bilikiewicz.
(SHOCK THERAPY,

*lungs in electric, insulin & metrazol shocks)

(LUNGS, physiology,

*in shock ther.)

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no.2:67-70 Apr-June '55.**

**1. Z Zakladu Radiologii Lekarskiej A.M. w Gdansk. Kierownik: prof
dr. W. Grabowski. Gdansk-Wrsesscs, Z. Rad.Lek.A.M.**

(BRAIN, abnormalities

agenesia of corpus callosum)

(GROWTH, in infant and child,

retardation caused by agenesia of corpus callosum)

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ZWYKIELSKI, Grzegorz; MATULEWICZ, Stanislaw

Osteosis dissecans. Polski przegl.chir. 27 no.4:335-340 Apr'55.

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ski) Gdansk-Wrzeszcz, ul. Wajdeloty 10.

(OSTEOCHONDritis,

dissecans, pathogen., terminol. problems)

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Retroperitoneal pneumography. Postepy radiol. 3:99-136
1956.

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med. Witold Grabowski.

(PNEUMOPERITONEUM, ARTIFICIAL
retropneumoperitoneum, technic (Pol))

DYBICKA, Anna; MATULEWICZ, Stanislaw; PIKLOWSKI, Jan

Primary tumors of the optic fasciculus. Neur. &c. polska
6 no.2:181-190 Mar-Apr 56.

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(CARDIOSPASM, therapy
(Pol))